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CLAIMS:

What is claimed is:

- 1 1. A method for self-defining data elements comprising:
2 associating a data element with metadata;
3 storing management information in the metadata;
4 providing one or more anchor points to begin
5 selected analysis processes; and
6 storing management rules and processing rules in the
7 metadata.
- 1 2. The method of claim 1, wherein the management
2 information comprises a time stamp.
- 1 3. The method of claim 1, wherein the management
2 information comprises a management rule.
- 1 4. The method of claim 3, wherein the management rule
2 comprises one of performance criteria, reliability
3 criteria, availability criteria, and capacity criteria.
- 1 5. The method of claim 1, wherein the management
2 information comprises a pointer to a management rule.
- 1 6. The method of claim 1, wherein the management
2 information comprises a sequencing rule.

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1 7. The method of claim 6, wherein the sequencing rule
2 comprises one of a logical rule, a time rule, and a
3 structure rule.

1 8. The method of claim 1, wherein the management
2 information comprises a pointer to a sequencing rule.

1 9. The method of claim 1, wherein the management
2 information comprises a management function for
3 accomplishing management rules.

1 10. The method of claim 1, wherein associating is
2 accomplished by physically storing the metadata with the
3 data.

1 11. The method of claim 1, wherein associating is
2 accomplished by storing a pointer with the data that
3 allows one to locate the metadata.

1 12. The method of claim 1, wherein anchor points are
2 pointers to the current location the metadata for
3 selected data elements.

1 13. The method of claim 1, wherein anchor points are
2 copies of the metadata for selected data elements.

1 14. The method of claim 1, wherein processing rules
2 define the order of selecting data elements for
3 processing.

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- 1 15. The method of 1, wherein processing rules define
2 controls for processing management information for each
3 data element.
- 1 16. The method of claim 15, wherein the processing
2 controls include sequential processing in priority order.
- 1 17. The method of claim 15, wherein the processing
2 controls include indexed processing following specific
3 tree structures first.
- 1 18. The method of claim 15, wherein the processing
2 controls include parallel processing.
- 1 19. The method of claim 18, wherein parallel processing
2 includes a separate instance of processing for each data
3 element found processed simultaneously.
- 1 20. The method of claim 18, wherein parallel processing
2 includes a separate instance of processing for each data
3 element found processed concurrently.
- 1 21. The method of claim 1, wherein management
2 information comprises a pointer to the location where
3 rules are stored.
- 1 22. A self-defining data element for enhanced data
2 management and recovery, comprising:
3 a data portion; and

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4 a metadata portion,
5 wherein the metadata includes management information
6 including management rules and processing rules and one
7 or more anchor points to begin selected analysis
8 processes.

1 23. The self-defining data element of claim 22, wherein
2 the management information comprises a time stamp.

1 24. The self-defining data element of claim 22, wherein
2 the management information comprises a management rule.

1 25. The self-defining data element of claim 24, wherein
2 the management rule comprises one of performance
3 criteria, reliability criteria, availability criteria,
4 and capacity criteria.

1 26. The self-defining data element of claim 22, wherein
2 the management information comprises a pointer to a
3 management rule.

1 27. The self-defining data element of claim 22, wherein
2 the management information comprises a sequencing rule.

1 28. The self-defining data element of claim 27, wherein
2 the sequencing rule comprises one of a logical rule, a
3 time rule, and a structure rule.

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A3 1 29. The self-defining data element of claim 22, wherein
2 the management information comprises a pointer to a
3 sequencing rule.

1 30. The self-defining data element of claim 22, wherein
2 the management information comprises a management
3 function for accomplishing management rules.

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